

### ABSTRACT

A pharmaceutical composition in the form of tablets or capsules provides a combination of temporal and spatial control of drug delivery to a patient for effective therapeutic results. The pharmaceutical composition comprises a drug, a gas generating component, a swelling agent, a viscolyzing agent, and optionally a gel forming polymer. The swelling agent belongs to a class of compounds known as superdisintegrants (e.g., cross-linked polyvinylpyrrolidone or sodium carboxymethylcellulose). The viscolyzing agent initially and the gel forming polymer thereafter form a hydrated gel matrix which entraps the gas, causing the tablet or capsule to <sup>be</sup> ~~float so that it is~~ retained in the stomach or upper part of the small intestine (spatial control). At the same time, the hydrated gel matrix creates a tortuous diffusion path for the drug, resulting in sustained release of the drug (temporal control). A preferred once daily ciprofloxacin formulation comprises 69.9% ciprofloxacin base, 0.34% sodium alginate, 1.03% xanthan gum, 13.7% sodium bicarbonate, 12.1% cross-linked polyvinylpyrrolidone, and optionally other pharmaceutical excipients, the formulation being in the form of a coated or uncoated tablet or capsule.